ABSTRACT OF THE DISCLOSURE

A method and apparatus for transporting data over a plurality of serial channels. A plurality of parallel data word are generated from a parallel data word of greater width. The plurality of parallel data words are scrambled in a predetermined manner utilizing a side scrambler to generate a plurality of cipher data words. A first bit is generated for each channel as an exclusive OR function from the cipher data word in the respective channel. A second bit is generated for each channel as an exclusive or function of the respective cipher data word and certain control information. The first bit is appended to the cipher data word for the channel from which it was derived. The second bit is appended to the cipher data word for a channel other than the one from which it was derived. The cipher data word and the first and second bits comprise a parallel extended width information word. The extended width information words are serialized and transmitted across a plurality of serial data channels corresponding in number to the number of parallel extended width information words. Receive logic is provided for each serial channel which converts received serial data to parallel data, obtain word synchronization and achieves aligns the words received over the respective channels to assure avoid word skew misalignment across channels. The received data is descrambled and recombined in the receive logic to obtain the originally transmitted data word. Offset side scramblers are designed so as to reduce near end and far end crosstalk.

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